

James Brown

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Education

- 09/99-08/02, Christ's College, University of Cambridge. Ph.D entitled 'Uncertainty propagation through a numerical model of storm surge flooding'.
- 09/96-06/99, University College London, B.Sc. in Environmental Geography (1st class).

Research Interests

- Hydraulic modeling, particularly flood inundation modeling.
- Sensitivity and uncertainty analysis of environmental models.
- Data assimilation, particularly in distributed models.
- Environmental decision-making under uncertainty.

Experience

- 09/06 – Current: Visiting Scientist, University Corporation for Atmospheric Research (UCAR), working on verification of ensemble forecasts; uncertainty propagation and data assimilation in hydraulic models.
- 04/03-09/06: Postdoc., University of Amsterdam, worked on uncertainty analysis of environmental data and models.
- 09/02-05/03: Lecturer in Physical Geography, King's College London.
- 08-10/1999: Risk Management Solutions Ltd., London, worked on flood risk mapping.

Service

- Reviewer for various journals, including *Geomorphology* and *Environmental Modelling and Software*.
- Member of Association of American Geographers.
- Contributor to various review panels (e.g. EC and UK Environment Agency projects).

Other interests

- Motorcycles.
- Golf, tennis, climbing.

Awards

- 06-current: UCAR postdoc.
- 08/99: Deans List for the Faculty of Social and Historical Sciences (B.Sc.)
- 08/98: WR Mead Prize (B.Sc.)

Recent publications

- **Brown, J.D.** and Heuvelink, G.B.M. (accepted) The Data Uncertainty Engine (DUE): a software tool for assessing and simulating uncertain environmental variables. Accepted by *Computers and Geosciences*
- Heuvelink G.B.M and **Brown, J.D.** (accepted) Defining probability distribution functions for uncertain environmental variables. Accepted by *International Journal of GIS*
- **Brown, J.D.**, Spencer, T., and Moeller, I (accepted) Modeling storm surge flooding of an urban area with particular reference to modeling uncertainties: a case study of Canvey Island, UK. Accepted by *Water Resources Research*
- Refsgaard, J.C., van der Sluijs, J., **Brown, J.D.**, and van der Keur, P. (2006) On the problem of dealing with uncertainty due to error in model structure. *Advances in Water Resources* in press
- **Brown, J.D.** and Heuvelink G.B.M. (2006) On the identification of uncertainties in spatial data and their quantification with probability distribution functions. In Wilson, J. and Fotheringham, S. (eds) *A Handbook to GIS*, Blackwell Publishers, in press.

- Norton, J.P., **Brown, J.D.** and Mysiak, J. (2006) To what extent, and how, might uncertainty be defined? Comments engendered by “Defining uncertainty: a conceptual basis for uncertainty management in model-based decision support” Walker *et al.* Integrated Assessment 4: 1 (2003). *Integrated Assessment*, **6**(1): 83-88

Recent presentations

- Heuvelink, G.B.M and **Brown, J.D.** (2005) Handling spatial uncertainty in GIS: development of the Data Uncertainty Engine (DUE). Keynote presentation at *GISPlanet 2005, May 30 - June 2, Lisboa, Portugal*. Paper published in *Proceedings of GISPlanet, Estoril, Portugal, May-June 2005*.
- Norton J.P., **Brown, J.D.** and Mysiak, J. (2005) Uses and Limitations of Uncertainty Assessment in Model-based Decision Support. Presentation at *International Symposium on Environmental Software Systems 2005, May 24-27, Sesimbra, Portugal*.
- **Brown, J.D.** and Heuvelink, G.B.M (2004) Assessing and recording uncertainties about environmental data. Invited for extended presentation at the *International Symposium on Spatial Data Quality (ISSDQ), 15th – 17th April, Bruck an der Leitha, Austria*.
- Heuvelink, G.B.M and **Brown, J.D.** (2004) Towards a soil information system for uncertain data. Presentation at the *Global Workshop on Digital Soil Mapping 2004, September 14th – 17th, Montpellier, France*.
- **Brown, J.D.** and Heuvelink, G.B.M. (2004) An integrated framework for assessing uncertainties in environmental data. Invited contribution to the *International Symposium on Uncertainty and Precaution in Environmental Management 2004, June 7th – 9th, Copenhagen, Denmark*.
- **Brown, J.D.** and Heuvelink G.B.M (2004) An integrated framework for assessing uncertainties in environmental data, illustrated for different types of data and different complexities of problem. Paper presented at *Accuracy 2004: 6th International Symposium on Spatial Data Accuracy, Portland, Maine, America, June 28th – July 1st*